Table 2
OEHHA/ARB APPROVED ACUTE REFERENCE EXPOSURE LEVELS AND TARGET ORGANS

Substance	Chemical Abstract Service Number (CAS)	Acute REL ($\mu g/m^3$)	Date Value Reviewed	Target Organs									
				Alimentary Tract	Cardiovascular	Developmental	Eye	Hematologic	Immune	Nervous	Reproductive	Respiratory	Skin
ACROLEIN	107-02-8	1.9E-01	4/99				X					X	
ACRYLIC ACID	79-10-7	6.0E+03	4/99				X					X	
AMMONIA	7664-41-7	3.2E+03	4/99				X					X	
ARSENIC AND COMPOUNDS (INORGANIC) TAC	7440-38-2 1016 [1015]	1.9E-01 AveP	4/99			X					X		
ARSINE	7784-42-1	1.6E+02	4/99					X					
BENZENE TAC	71-43-2	1.3E+03 AveP	4/99			X		X	X		X		
BENZYL CHLORIDE	100-44-7	2.4E+02	4/99				X					X	
CARBON DISULFIDE	75-15-0	6.2E+03 AveP	4/99			X				X	X		
CARBON MONOXIDE	630-08-0	2.3E+04	4/99		X								
CARBON TETRACHLORIDE TAC (Tetrachloromethane)	56-23-5	1.9E+03 AveP	4/99	X		X				X	X		
CHLORINE	7782-50-5	2.1E+02	4/99				X					X	
CHLOROFORM TAC	67-66-3	1.5E+02 AveP	4/99			X				X	X		
CHLOROPICRIN	76-06-2	2.9E+01	4/99				X					X	
COPPER AND COMPOUNDS	7440-50-8 [1067]	1.0E+02	4/99									X	
Cyanide Compounds (inorganic)	*57-12-5 1073*	*3.4E+02*	*4/99*							✓			
HYDROGEN CYANIDE (Hydrocyanic acid)	74-90-8	3.4E+02	4/99							X			
1,4-DIOXANE ✣ (1,4-Diethylene dioxide)	123-91-1	3.0E+03	4/99				X					X	
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106-89-8	1.3E+03	4/99				X					X	
Fluorides and Compounds	*1101*	*2.4E+02*	*4/99*				✓					✓	
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664-39-3	2.4E+02	4/99				X					X	
FORMALDEHYDE TAC	50-00-0	9.4E+01	4/99				X		X			X	
GLYCOL ETHERS	1115												
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111-76-2	1.4E+04	4/99				X					X	
ETHYLENE GLYCOL ETHYL ETHER – EGEE	110-80-5	3.7E+02 AveP	4/99 [1/92]			X					X		
ETHYLENE GLYCOL ETHYL ETHER ACETATE - EGEEA	111-15-9	1.4E+02 AveP	4/99			X				X	X		
ETHYLENE GLYCOL METHYL ETHER – EGME	109-86-4	9.3E+01 AveP	4/99			X					X		

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Substance	Chemical Abstract Service Number (CAS)	Acute REL ($\mu g/m^3$)	Date Value Reviewed	Target Organs									
				Alimentary Tract	Cardiovascular	Developmental	Eye	Hematologic	Immune	Nervous	Reproductive	Respiratory	Skin
HYDROCHLORIC ACID (Hydrogen chloride)	7647-01-0	2.1E+03	4/99				X					X	
HYDROGEN CYANIDE (Hydrocyanic acid) ... (see Cyanide Compounds)													
HYDROGEN FLUORIDE (Hydrofluoric acid) ... (see Fluorides & Compounds)													
HYDROGEN SELENIDE ... (see Selenium & Compounds)													
HYDROGEN SULFIDE	7783-06-4	4.2E+01	4/99 [7/90]							X			
ISOPROPYL ALCOHOL (Isopropanol)	67-63-0	3.2E+03	4/99				X					X	
MERCURY AND COMPOUNDS (INORGANIC)	7439-97-6 [1133]	1.8E+00	4/99			X					X		
Mercuric chloride	*7487-94-7*	*1.8E+00*	*4/99*			✓					✓		
METHANOL	67-56-1	2.8E+04	4/99							X			
METHYL BROMIDE (Bromomethane)	74-83-9	3.9E+03	4/99			X				X	X	X	
METHYL CHLOROFORM (1,1,1-Trichlbroethane)	71-55-6	6.8E+04	4/99							X			
METHYL ETHYL KETONE (2-Butanone)	78-93-3	1.3E+04	4/99				X					X	
METHYLENE CHLORIDE[TAC] (Dichloromethane)	75-09-2	1.4E+04	4/99							X			
NICKEL AND COMPOUNDS[TAC]	7440-02-0 [1145]	6.0E+00	4/99						X			X	
Nickel acetate,	*373-02-4*	*6.0E+00*	*4/99*						✓			✓	
Nickel carbonate	*3333-67-3*	*6.0E+00*	*4/99*						✓			✓	
Nickel carbonyl	*13463-39-3*	*6.0E+00*	*4/99*						✓			✓	
Nickel hydroxide	*12054-48-7*	*6.0E+00*	*4/99*						✓			✓	
Nickelocene	*1271-28-9*	*6.0E+00*	*4/99*						✓			✓	
NICKEL OXIDE	1313-99-1	6.0E+00	4/99						X			X	
Nickel refinery dust from the pyrometallurgical process	*1146*	*6.0E+00*	*4/99*						✓			✓	
Nickel subsulfide	*12035-72-2*	*6.0E+00*	*4/99*						✓			✓	
NITRIC ACID	7697-37-2	8.6E+01	4/99									X	
NITROGEN DIOXIDE	10102-44-0	4.7E+02	4/99 [1/92]									X	
OZONE	10028-15-6	1.8E+02	4/99 [1/92]				X					X	
PERCHLOROETHYLENE[TAC] (Tetrachloroethylene)	127-18-4	2.0E+04	4/99				X			X		X	

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Substance	Chemical Abstract Service Number (CAS)	Acute REL ($\mu g/m^3$)	Date Value Reviewed	Target Organs									
				Alimentary Tract	Cardiovascular	Developmental	Eye	Hematologic	Immune	Nervous	Reproductive	Respiratory	Skin
PHENOL	108-95-2	5.8E+03	4/99				X					X	
PHOSGENE	75-44-5	4.0E+00	4/99									X	
PROPYLENE OXIDE	75-56-9	3.1E+03	4/99			X	X				X	X	
Selenium and Compounds	*7782-49-2 [1170]*												
HYDROGEN SELENIDE	7783-07-5	5.0E+00	4/99				X					X	
SODIUM HYDROXIDE	1310-73-2	8.0E+00	4/99				X					X	X
STYRENE	100-42-5	2.1E+04	4/99				X					X	
SULFATES	9960	1.2E+02	4/99									X	
SULFUR DIOXIDE	7446-09-5	6.6E+02	4/99 [1/92]									X	
SULFURIC ACID AND OLEUM	7664-93-9	1.2E+02	4/99									X	
SULFURIC ACID	*7664-93-9*	*1.2E+02*	*4/99*									✓	
SULFUR TRIOXIDE	*7446-71-9*	*1.2E+02*	*4/99*									✓	
OLEUM	*8014-95-7*	*1.2E+02*	*4/99*									✓	
TOLUENE	108-88-3	3.7E+04	4/99			X	X			X	X	X	
TRIETHYLAMINE	121-44-8	2.8E+03	4/99				X			X			
Vanadium Compounds	*N/A*												
Vanadium (fume or dust)	*7440-62-2*	*3.0E+01*	*4/99*				✓					✓	
VANADIUM PENTOXIDE	1314-62-1	3.0E+01	4/99				X					X	
VINYL CHLORIDE[TAC] (Chloroethylene)	75-01-4	1.8E+05	4/99				X			X		X	
XYLENES (mixed isomers)	1330-20-7 1210	2.2E+04	4/99				X					X	
m-Xylene	108-38-3	2.2E+04	4/99				X					X	
o-Xylene	95-47-6	2.2E+04	4/99				X					X	
p-Xylene	106-42-3	2.2E+04	4/99				X					X	

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Table 2
OEHHA/ARB APPROVED ACUTE REFERENCE EXPOSURE LEVELS AND TARGET ORGANS[❁]

Purpose:	The purpose of this reference table is to provide a quick list of all health values that have been approved by the Office of Environmental Health Hazard Assessment (OEHHA) and the Air Resources Board (ARB) for use in facility health risk assessments conducted for the AB 2588 Air Toxics Hot Spots Program. The OEHHA has developed and adopted new risk assessment guidelines that update and replace the California Air Pollution Control Officers Association's (CAPCOA) *Air Toxics "Hot Spots" Program Revised 1992 Risk Assessment Guidelines, October 1993*. The OEHHA has adopted five technical support documents for these guidelines. This table lists the OEHHA adopted inhalation noncancer acute RELs. In addition, it lists the substances in Appendix A-I *(Substances For Which Emissions Must Be Quantified*) and Appendix F (*Criteria For Inputs For Risk Assessment Using Screening Air Dispersion Modeling*) of the ARB's *Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines (EICG) (July 1997)*. OEHHA is still in the process of adopting new noncancer chronic RELs. Therefore, new health values will periodically be added to, or deleted from, this table. Users of this table are advised to monitor the OEHHA website (*www.oehha.ca.gov*) for any updates to the health values.
❁	Substances written in *italics* and with a ✓ do not have explicit OEHHA approved health values, but are included in this table to clarify applicability of OEHHA adopted heath effects values to individual or grouped substances listed in the *Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines*, Appendix A-I list of *"Substances For Which Emissions Must Be Quantified"*.
▼	Chemical Abstract Service Number (CAS): For chemical groupings and mixtures where a CAS number is not applicable, the 4-digit code used in the *Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines (EICG) Report* is listed. The 4-digit codes enclosed in brackets [ ] are codes that have been phased out, but may still appear on previously reported Hot Spots emissions. For information on the origin and use of the 4-digit code, see the EICG report.
◆	Date Value Reviewed [Added]: This column lists the date that the health value was last reviewed by OEHHA and the Scientific Review Panel, and/or approved for use in the AB 2588 Air Toxics Hot Spots Program. If the health value is unchanged since it was first approved for use in the "Hot Spots" Program, then the date that the value was first approved for use by CAPCOA is listed within the brackets [ ]. • April 1999 is listed for the noncancer acute RELs which have been adopted by the OEHHA as part of the AB 2588 Hot Spot Risk Assessment Guidelines.
TAC	Toxic Air Contaminant: The Air Resources Board has identified this substance as a Toxic Air Contaminant.
AveP	The averaging period of noncancer acute RELs is generally a one-hour exposure. However, some are based on several hour exposure for reproductive/developmental endpoints (see section 1.6 of OEHHA's technical support document for *The Determination of Acute Reference Exposure Levels for Airborne Toxicants, March 1999).* Typically the RELs for the following substances are compared to modeled emission concentrations of the same duration rather than maximum one-hour concentrations (e.g., a 4-hour REL should be compared to the maximum 4-hour average concentration from the air dispersion model). 4-Hour: Arsenic and Inorganic Arsenic Compounds 6-Hour: Benzene, Carbon disulfide, Ethylene glycol ethyl ether, Ethylene glycol ethyl ether acetate, Ethylene glycol methyl ether 7-Hour: Carbon tetrachloride, Chloroform

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